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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/088,514	07/17/2002	Hiroyuki Mochidome	020367	4510

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[REDACTED] ART UNIT

[REDACTED] PAPER NUMBER

3612

DATE MAILED: 09/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Offic Action Summary	Application No.	Applicant(s)
	10/088,514	MOCHIDOME ET AL.
	Examiner Paul A. Chenevert	Art Unit 3612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 31 December 2002.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-20 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-7,9,14,17 and 20 is/are rejected.

7) Claim(s) 8,10-13,15,16,18 and 19 is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 17 July 2002 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

- Certified copies of the priority documents have been received.
- Certified copies of the priority documents have been received in Application No. _____.
- Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____.
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. Figures 20, 21A, & 21B should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to because of the following minor informalities:
 - a. Reference number "17d" (lower occurrence) should be changed to "17e" to designate the protrusion; see page 37, line 27 and Figures 6-9 for correct number.
 - b. Figures "21A" & "21B" should be changed to "21(a)" & "21(b)" in order to correspond with the Specification.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

4. The disclosure is objected to because of the following informalities:
 - a. Page 3, line 8, "110" should be changed to "111" for the outer wall.

- b. Page 15, line 27, "Fig. 6" should be changed to "Fig. 4"
- c. Page 16, lines 23 & 26, "Prior Art" should be inserted after "Fig. 20" and "Figs. 21(a) and 21(b)".
- d. Page 23, line 2, "47, 48" should be changed to "48"; see Figures 2 & 3.
- e. Page 34, line 5, "40c" should be changed to "40g".
- f. Page 34, line 7, "crash portion 40d" should be changed to "body 40b".
- g. Page 39, line 22, "84" should be changed to "85".
- h. Page 41, line 6, "81, 81" should be changed to "81, 82".
- i. Page 41, line 20, "39d, 40d" should be changed to "81d, 82d".
- j. Page 41, line 21, "39, 40" should be changed to "81, 82".
- k. Page 43, line 12, "92" should be changed to "91".

Appropriate correction is required.

Claim Objections

- 5. Claims 3, 4, & 20 are objected to because of the following informalities:
 - a. Claim 3, line 4, "forwardly" should be changed to "rearwardly".
 - b. Claim 20, line 1, "claims 1 to 19" should be changed to "claim 1".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

- 2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Fageol.

Fageol discloses a vehicle body structure (passenger carrying vehicle or bus) characterized in that a crush zone is provided on a front head side (Figure 2) of the vehicle relative to a passenger compartment (Figure 1). The crush zone has three vertical beams (frame members 43-45) having straight portions extending along a vertical direction. In regards to claim 2, the vertical straight portions were set according to the vertical displacement that a normal bus would achieve during normal operations. In regards to claims 3 & 4, the vertical beams are placed along the front of the bus and connect the floor to the roof. In regards to claim 5, the straight portion is located at a most forward position.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 6, 7, & 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fageol in view of Masuda et al.

Fageol discloses a vehicle body structure (bus) having a crush zone provided on a front head side of the vehicle with a skirt angle (17) connecting the frame members.

However, Fageol does not expressly disclose a bumper, nor does the bumper have buckling strength changing means provided in opposite side portions or a reinforcing member provided in the central portion.

Masuda et al. disclose a bumper (reinforcement 1) having buckling strength changing means (plurality of ridges 6) provided in opposite side portions (curved portions 5) or a reinforcing member (beads 12; see column 3, lines 36-40) provided in the central portion (main body 2).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the crush zone of Fageol, to employ a bumper having buckling strength changing means and a reinforcing member, as taught by Masuda et al.

The suggestion/motivation for doing so would have been to provide a bumper on the passenger carrying vehicle for protection, as is desired in this vehicle invention.

Therefore, it would have been a desirable and thus a *prima facie* obvious modification of the vehicle body structure of Fageol by combining a bumper with the vehicle frame to obtain the invention as specified in claim 6, as taught by the prior references' motivation, and not hindsight from the applicants disclosure.

7. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fageol in view of Hirano et al.

Fageol discloses a vehicle body structure (bus) having a crush zone.

However, Fageol does not expressly disclose a cushioning member having a protrusion exposed forward.

Hirano et al. disclose a cushioning member (impact absorbing device 100) having a protrusion (shock absorber 21) exposed forward.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the crush zone of Fageol, to employ a cushioning member having a protrusion, as taught by Hirano et al.

The suggestion/motivation for doing so would have been to provide a cushioning member on the passenger carrying vehicle for protection, as is desired in this vehicle invention.

Therefore, it would have been a desirable and thus a *prima facie* obvious modification of the vehicle body structure of Fageol by combining a bumper with the vehicle frame to obtain the invention as specified in claim 14, as taught by the prior references' motivation, and not hindsight from the applicants disclosure.

8. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hirano et al. in view of Fageol and Zurell.

Hirano et al. discloses a cushioning member.

However, Hirano et al. do not expressly disclose that the cushioning member has a vertical restraining member on the front end portion nor that the cushioning member is located on a vehicle body structure having vertical beams with straight portions.

Fageol discloses a vehicle body structure having vertical beams with straight portions.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the cushion members of Hirano et al, to employ them on a vehicle body structure, as taught by Fageol.

The suggestion/motivation for doing so would have been to provide the cushioning members on a passenger carrying vehicle for protection, as is desired in this vehicle invention.

Zurell discloses vertical restraining member on the front end of bumpers.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the cushioning members of Hirano et al, as modified, to employ vertical restraining members, as taught by Zurell.

The suggestion/motivation for doing so would have been to ensure that vehicle do not rise above one another during collisions, as is desired in this vehicle invention.

Therefore, it would have been a desirable and thus a *prima facie* obvious modification of the cushioning member of Hirano et al., as modified, by combining vertical restraining members with the front end portions of the cushioning members to obtain the invention as specified in claim 17, as taught by the prior references' motivation, and not hindsight from the applicants disclosure.

9. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over the Applicants' cited Prior Art (Figures 20, 21A, & 21B) in view of Fageol.

Applicants' have cited an electric vehicle traveling on a dedicated track with a crush zone not having vertical beams with straight portions.

Fageol discloses a vehicle body structure (bus) with a crush zone having vertical beams having straight portions.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the crush zone of the Applicants' cited Prior Art, to employ vertical beams having straight portions, as taught by Fageol.

The suggestion/motivation for doing so would have been to provide a stronger crush zone, as is desired in this vehicle invention.

Therefore, it would have been a desirable and thus a *prima facie* obvious modification of the vehicle body structure of the Applicants' cited Prior Art by combining vertical beams having straight portions to obtain the invention as specified in claim 20, as taught by the prior references' motivation, and not hindsight from the applicants disclosure.

Allowable Subject Matter

10. Claims 8, 10-13, 15, 16, 18, & 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. The following is a statement of reasons for the indication of allowable subject matter: the prior art does not show or make obvious Applicant's buckling strength changing means as holes, the auxiliary member, cushioning member connected by a connecting member, or the hollow box vertical restraining member.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul A. Chenevert whose telephone number is 703-305-0837. The examiner can normally be reached on Mon-Fri (8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn D. Dayoan can be reached on 703-308-3102. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1134.

Paul A. Chenevert
Examiner
Art Unit 3612

PAC

Joseph D. Pape 9/12/03
JOSEPH D. PAPE
PRIMARY EXAMINER